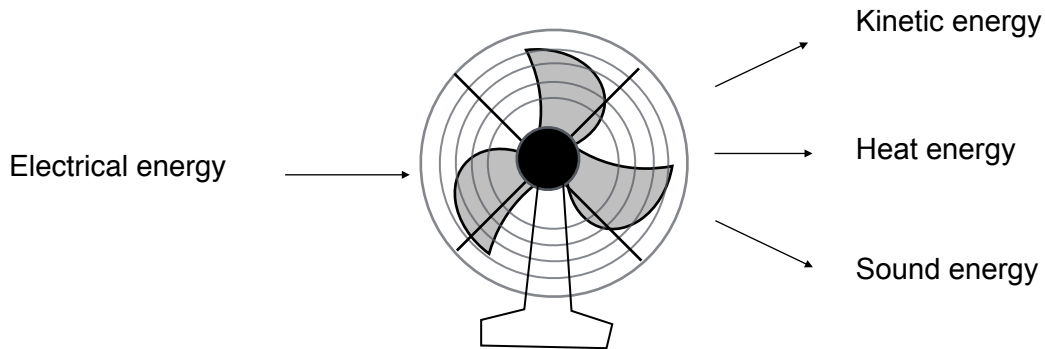


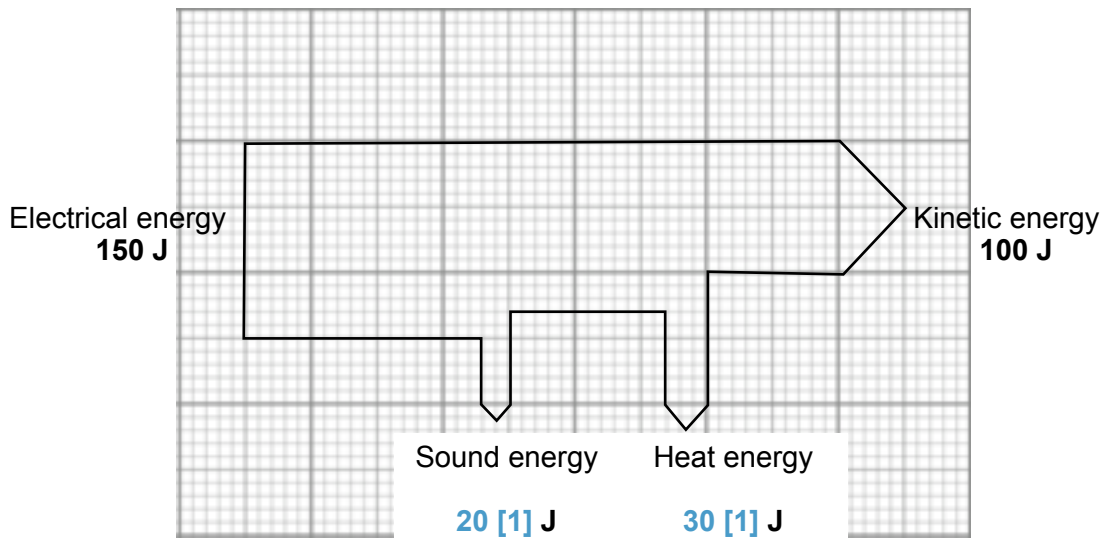
1 An electrical fan transfers energy in order to create a flow of air. Some of the types of energy involved in the transfer are shown below.



1 (a) (i) What is the relationship between the total energy input and total energy output from the fan? **[1 mark]**

The total energy in is the same or equal to the total energy out (or it is the same). [1]

1 (a) (ii) Here is a Sankey diagram showing information about the energy transfers for the fan.



Complete the Sankey diagram to show the amounts of sound and heat energy transferred. **[2 marks]**

1 (a) (iii) Calculate the **percentage** efficiency of the fan. **[2 marks]**

$100 / 150 \times 100$ [1]

Remember you get full marks for a correct answer, but always show working.

Efficiency 66.67 or 66.7 or 67 % [2]

(Total 5)

End